

Remarks

Based on the above amendments and the following remarks, Applicants respectfully request that the Examiner reconsider and withdraw the outstanding rejections.

Claim Status

Upon entry of the foregoing amendments, claims 9, 12-14, 17, 19-21 and 26 are pending in the application, with claims 9, 13, 19 and 21 being the independent claims. Claims 11 and 15-16 are sought to be cancelled. Claims 9, 13, 19 and 21 have been amended. Support for the claim amendments can be found in the original claims and throughout the Specification. See, for example, in Example 1 at page 45 of the application as filed. Thus, no new matter is added by way of these amendments, and their entry is respectfully requested.

Claim Rejections Under 35 U.S.C. § 112

Claim 11 is rejected under 35 U.S.C. § 112, second paragraph as being indefinite. To expedite allowance, claim 11 has been cancelled. Therefore, rejection with respect to this claim is moot and Applicants respectfully request that the rejection of claim 11 under 35 U.S.C. § 112, second paragraph be withdrawn.

Claim Rejections Under 35 U.S.C. § 102

Claims 9, 12-14, 17, 19-21 and 26 are rejected under 35 U.S.C. § 102(b) as being anticipated by Rothenberg *et al.* (J. Virol., 1974) as evidenced by Murray *et al.* (Medical Microbiology, 1998). Applicants respectfully disagree.

An anticipation rejection under 35 U.S.C. § 102 requires a showing that each limitation of a claim is found in a single reference, practice or device. See *Kalman v. Kimberly Clark Corp.*, 713 F.2d 760, 771 (Fed. Cir. 1983), cert. denied, 465 U.S. 1026 (1984). See also M.P.E.P. 8th ed., § 2131 (rev. 2, May 2004) ("To anticipate a claim, the reference must teach every element of the claim.").

Amended claims 9, 12, and 26 recite compositions for use in reverse transcription of a nucleic acid molecule, comprising one or more *purified* polypeptides having reverse transcriptase activity, Mg^{2+} or salt thereof and dNTPs in excess of said Mg^{2+} or salt thereof, thereby preventing, reducing, substantially reducing, or eliminating degradation of nucleic acid templates during nucleic acid synthesis.

Claims 13-14 recite methods for reverse transcription of one or more nucleic acid molecules comprising:

(a) mixing one or more RNA templates, one or more *purified* polypeptides having reverse transcriptase activity, Mg^{2+} or salt thereof and dNTPs in excess of said Mg^{2+} or salt thereof; and

(b) incubating mixture of (a) under conditions sufficient to make one or more first DNA molecules complementary to all or a portion of one or more RNA templates.

Claim 17 recites a cDNA made according to claim 13.

Claim 19 recites a method for amplifying one or more nucleic acid molecules, comprising:

(a) mixing one or more RNA templates, one or more *purified* polypeptides having reverse transcriptase activity, one or more DNA polymerases, Mg^{2+} or salt thereof and dNTPs in excess of Mg^{2+} or salt thereof; and

(b) incubating mixture of (a) under conditions sufficient to amplify one or more nucleic acid molecules complementary to all or a portion of one or more RNA templates.

Claim 20 recites a nucleic acid molecule amplified according to the method of claim 19.

Claim 21 recites a kit for use in reverse transcription, or amplification of a nucleic acid molecule, comprising a *purified* reverse transcriptase, Mg^{2+} or salt thereof and dNTPs in excess of the Mg^{2+} or salt thereof.

Rothenberg *et al.* teach the use of detergent-disrupted virions of Moloney murine leukemia virus (MMLV) for use in endogenous reverse transcription reactions. See, for example, Rothenberg at page 168, abstract and second column, 1st full ¶. As evidenced by Murray *et al.*, the disrupted virions of Rothenberg would comprise not only MMLV reverse

transcriptase, but a myriad of other elements including, for example, viral glycoproteins, protease and integrase enzymes, capsid proteins, *etc.*. See, for example, Murray at page 509. This is in contrast to the present claims which recite compositions, methods, and kits that involve *purified* polypeptides having reverse transcriptase activity for use in reverse transcription reactions.

Moreover, there appears to be no evidence to the contrary that Rothenberg's detergent-disrupted virion preparations might also include additional free Mg^{2+} . Therefore, unlike what is presently claimed, the total amount of Mg^{2+} present in Rothenberg's endogenous reverse transcriptase reactions may actually exceed the total amount of dNTPs that are present.

For at least the reasons discussed above, Rothenberg does not anticipate the present claims and Applicants respectfully request that the rejection of claims 9, 12-14, 17, 19-21 and 26 under 35 U.S.C. § 102(b) be withdrawn.

Claim Rejections Under 35 U.S.C. § 103

Claims 11 and 15-16 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Rothenberg *et al.* further in view of Schwabe *et al.*. Simply to expedite allowance, Applicants have cancelled these claims. Thus, rejection with respect to claims 11 and 15-16 is moot and Applicants respectfully request that the rejection of claims 11, 15-16 under 35 U.S.C. § 103(a) be withdrawn.

Conclusion

All of the stated grounds of rejection have been properly traversed, accommodated, or rendered moot. Applicants therefore respectfully request that the Examiner reconsider and withdraw all presently outstanding rejections. Applicants believe that a full and complete reply has been made to the outstanding Final Office Action and, as such, the present application is in condition for allowance.

Prompt and favorable consideration of this Amendment and Reply is respectfully requested.

Respectfully submitted,

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